

## **Response to Rejection Under 35 U.S.C. 102(b)**

The examiner rejected Claims 1-16 under 35 U.S.C 102(b).

Then Claims 10-16 are canceled. Claim 1 is amended like below according to the points which the examiner pointed in Detailed Action of Final Rejection..

1.Column 1, line 56-59 in the US005924096A

10 "One synchronization method sends a list of cached database object identifiers and corresponding timestamps or sequence numbers from the caching node to a master node which holds a master replica."

i). The examiner has pointed in page 3, line 17-18 in the Final Rejection like below for the quotation of column 1, line 56-59 in the US005924096A indicated above.

or meta data of said database  
management systems,

20 A topology administration server does not take distributed databases inside the domain as a black box, but may take meta data of a database as virtual clustered database like said a black box.

Therefore "metadata" quoted by the examiner on page 3, line 17 in the Final Rejection does not corresponding to "list" in the quotation of column1, line 56-59 in the US005924096A indicated above at all.

This fraise is only example of information of said database management systems, so "or meta data of said database management systems" is deleted.

30 ii). The examiner has pointed in page 4, line 10-17 in the Final Rejection like below for the quotation of column 1, line 56-59 in the US005924096A indicated above.

and said topology administration server comprises:  
storage for topology information, which stores topology information,  
including certain information correlating a database object identifier,  
which is information  
for identifying a database object administered

by said database administration apparatus,  
with an identifier  
of a database administration apparatus  
for identifying a database administration  
apparatus administering the database object;

Herein in my invention, the framework of claim 1 is below.

A distributed database system comprising:

10                    plurality of administration domains,  
                     wherein  
                     each of said administration domains comprising:  
                         one or more database administration apparatuses;  
                         a topology administration server;  
                         and said client computers;

20                    So in my invention, there is no meaning if caching nodes and a master node  
which holds a master replica exist in the domain or not, but there is meaning that the  
database administration apparatus information of which the a database object  
20                    identifier identifies the database administration apparatus as a topology information  
which is held by a topology administration server of the database domain which can  
communicate with other database domains which have topology administration servers.

                     Therefore "master node" in the Draper's is not corresponding to database  
administration apparatus " at all.

2. Column 3, line 1-4 in the US005924096A

                     "The index can be used to efficiently create a list of recent events, which can  
then be sent to a master node to obtain the information needed to update a local cache of  
database objects or records."

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i). The examiner has pointed in page 3, line 2-3 in the Final Rejection like below for the  
quotation of column 3, line 1-4 in the US005924096A indicated above.

one or more database administration apparatuses,  
which administers database allocated  
on said

database administration apparatuses  
themselves

Herein in my invention, the framework of claim 1 is below.

A distributed database system comprising:

plurality of administration domains,

wherein

each of said administration domains comprising:

10                                   one or more database administration apparatuses;  
                                  a topology administration server;  
                                  and said client computers;

20                   There is no idea that the master node and cache nodes are cited on the  
distributed database system domain by domain which I wrote in my invention. In the  
domain, the master node and some cache nodes relation may be cited, but the  
distributed database system domain by domain which I wrote in my invention treat  
that types of distributed database system which has the master node and some cache  
nodes relation as a virtual clustered database, and database domains communicate  
30                   their information as one database system information each other. Herein said one  
database system may one real database system or one virtual clustered database  
system which comprises the master node and some cache nodes. Furthermore the  
relation of each database domain is not master slave system model but peer to peer  
system model.

                  Therefore "master node" in the Draper's is not corresponding to database  
administration apparatus " at all.

30                   ii). The examiner has pointed in page 6, line 18-19 in the Final Rejection like below for  
the quotation of column 3, line 1-4 in the US005924096A indicated above.

                  a caching unit for a database object,

                  which caches a database object received

                  by the receiver

                  for a database object;

There is no idea that the master node and cache nodes are cited on the distributed database system domain by domain which I wrote in my invention. In the domain, the master node and some cache nodes relation may be cited, but the distributed database system domain by domain which I wrote in my invention treat that types of distributed database system which has the master node and some cache nodes relation as a virtual clustered database, and database domains communicate their information as one database system information each other. Herein said one database system may one real database system or one virtual clustered database system which comprises the master node and some cache nodes. Furthermore the relation of each database domain is not master slave system model but peer to peer system model.

Furthermore this portion of claim1 above is amended like below to change word "cache" to word "data" and word "caching" to word "storing" to make word "cache" and word "caching" be correct words because verb "cache" is used as "holds data in just near place" and word "caching" is used as "holding data in just near place" also in Japanese sometimes.

and a storing unit for a database object,  
which stores a database object received  
by the receiver  
for a database object;

Therefore "cache of database objects" in the Draper's is not corresponding to "stores a database object" between database domains" at all.

3. Column 3, line 13-16 in the US005924096A

"one cache may add a data item to the cache each time an add event occurs, while another cache only changes the cache when a modify event occurs."

i). The examiner has pointed in page 4, line 22 - page 5, line 1-3 in the Final Rejection like below for the quotation of column3, line 13-16 in the US005924096A indicated above with "this cache request is necessary for effecting the division of tasks between caches described in column 3, line 13-16".

a receiver for a cache request,

which receives a cache request  
including said database object identifier transmitted  
from said client computers  
for caching a database object identified  
by said database object identifiers;

10 This portion of claim1 above is amended like below to change word "cache" to  
word "data" and word "caching" to word "retrieving" to make word "cache" and word  
"caching" be correct words because noun "cache" is used as "data which is in just near  
place" and word "caching" is used as "retrieving to just near place" also in Japanese  
sometimes.

a receiver for a data request,  
which receives a data request  
including said database object identifier transmitted  
from said client computers  
for retrieving a database object identified  
by said database object identifiers;

20 Therefore it is not necessary to effect the division of tasks between caches at all  
because there are no caches.

ii). The examiner has pointed in page 5, line 11-14 in the Final Rejection like below for  
the quotation of column 3, line 13-16 in the US005924096A indicated above with "this  
cache request is necessary for effecting the division of tasks between caches described in  
column 3, line 13-16".

30 a transferring unit for a cache request,  
which transfers said cache request  
to the database administration apparatus identified  
by the identifier  
of the database administration apparatus,  
in which said identifier is acquired  
by said acquisition unit  
for an identifier  
of a database administration apparatus;

This portion of claim1 above is amended like below to change word "cache" to word "data" to make word "cache" be correct words because noun "cache" is used as "data which is in just near place".

a transferring unit for a data request,  
which transfers said data request  
to the database administration apparatus identified  
by the identifier  
of the database administration apparatus,  
in which said identifier is acquired  
by said acquisition unit  
for an identifier  
of a database administration apparatus;

Therefore it is not necessary to effect the division of tasks between caches at all because there are no caches.

iii). The examiner has pointed in page 6, line 7-8 in the Final Rejection like below for the quotation of column 3, line 13-16 in the US005924096A indicated above with "this cache request is necessary for effecting the division of tasks between caches described in column 3, line 13-16".

said computer comprises:  
a transmitter for a cache request,  
which transfers a cache request,

This portion of claim1 above is amended like below to change word "cache" to word "retrieve" to make word "cache" be correct word because word "cache" is used as "fetch data into just near place".

said computer comprises:  
a transmitter for a retrieve-request,  
which transfers a retrieve-request,

Therefore it is not necessary to effect the division of tasks between caches at all

because there are no caches.

iv). The examiner has pointed in page 6, line 12-14 in the Final Rejection like below for the quotation of column 3, line 13-16 in the US005924096A indicated above with "this cache request is necessary for effecting the division of tasks between caches described in column 3, line 13-16".

10                   a receiver for a database object,  
                    which stores the database object returned  
                    in accordance  
                    with the transmission  
                    of the cache-request  
                    by said transmitter  
                    for a cache-request;

This portion of claim1 above is amended like below to change word "cache" to word "retrieve" to make word "cache" be correct word because word "cache" is used as "fetch data into just near place".

20                   a receiver for a database object,  
                    which stores the database object returned  
                    in accordance  
                    with the transmission  
                    of the retrieve-request  
                    by said transmitter  
                    for a retrieve-request;

Therefore it is not necessary to effect the division of tasks between caches at all because there are no caches.

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4. Column 6, line 15-17 in the US005924096A

"Fig5 illustrates several methods of the present invention for managing a distributed database ob objects, records, or other data items 202."

i). The examiner has pointed in page 2, line 19-20 in the Final Rejection like below for the quotation of column 6, line 15-17 in the US005924096A".

A distributed database system comprising:

"a distributed database of object" described in page 2, line 19-20 in the Final Rejection is not assumed that the distributed database is cited on a database domain which is one of database domains connected with network each other, but is cited on non-limited network environment in logically. The distributed database cited on a database domain which is one of database domains connected with network like this presented invention has more efficient from the distributed database cited on one network environment in speed and scalability. Database meta information of the database management system as topology data are exchanged with the topology administrator system cited on border of database domain each other incrementally.

Therefore Draper's Distributed database system and the distributed database system described in the presented invention is different system from the starting point.

5. Column 8, line 3-5 in the US005924096A

"The system 600 includes a master system 602 denoted 'A' and second master system 604 denoted 'B'."

i). The examiner has pointed in page 3, line 11 in the Final Rejection like below for the quotation of column 8, line 3-5 in the US005924096A".

a topology administration server

"The system 600 includes a master system 602" replicates data in the database itself, but "a topology administration server" does not share data itself, but meta data of the database is shared by topology administrator system which is cited on each database domains. The system 600 may be cited on a database domain which is connected to other database domains via network.

Therefore Draper's Distributed database system and the distributed database system described in the presented invention is different system from at the starting point.

ii). The examiner has pointed in page 4, line 1-3 in the Final Rejection like below for the



quotation of column 8, line 3-5 in the US005924096A".

and said client computers,  
which are allocated on the network  
beneath said database  
administration apparatuses administered  
with said topology administration server;

10 " The system 600 includes a master system 602 denoted 'A' and second master  
system 604 denoted 'B'." replicates data in the database itself, but "a topology  
administration server" does not share data itself, but meta data of the database is  
shared by topology administrator system which is cited on each database domains. The  
system 600 may be cited on a database domain which is connected to other database  
domains via network.

Therefore Draper's Distributed database system and the distributed database  
system described in the presented invention is different system from at the starting  
point.

20 iii). The examiner has pointed in page 4, line 6-7 in the Final Rejection like below for the  
quotation of column 8, line 3-5 in the US005924096A".

wherein  
said topology administration servers exchange their topology information each  
other,

30 " The system 600 includes a master system 602 denoted 'A' and second master  
system 604 denoted 'B'." replicates data in the database itself, but "a topology  
administration server" does not share data itself, but meta data of the database is  
shared by topology administrator system which is cited on each database domains. The  
system 600 may be cited on a database domain which is connected to other database  
domains via network.

Therefore Draper's Distributed database system and the distributed database  
system described in the presented invention is different system from at the starting  
point.



" The system 600 includes a master system 602 denoted 'A' and second master system 604 denoted 'B'." replicates data in the database itself, but "a topology administration server" does not share data itself, but meta data of the database is shared by topology administrator system which is cited on each database domains. The system 600 may be cited on a database domain which is connected to other database domains via network.

10 Therefore Draper's Distributed database system and the distributed database system described in the presented invention is different system from at the starting point.

6. Figure 6 and Column 8, line 11-12 in the US005924096A

"The system 600 also includes two client caches 608, 610, which reside on clients 110. "

i). The examiner has pointed in page 3, line 6-9 in the Final Rejection like below for the quotation of column 8, line 11-12 in the US005924096A".

20 themselves or client computers  
wherein  
client computers are comprising:  
at least one or more CPU,  
and main memories,  
and one or more  
network Information cards;  
on the network  
in said administration domain;

30 Draper's client computers are connected to Master Systems directly, but the client computers of which described in the invention presented are available to be connected with both Topology administration server 109 or Database administration apparatus 108 on Fig.1 of this application.

ii). The examiner has pointed in page 4, line 1-3 in the Final Rejection like below for the quotation of column 8, line 11-12 in the US005924096A".

and said client computers,  
which are allocated on the network  
beneath said database  
administration apparatuses administered  
with said topology administration server;

Draper's client computers are connected to Master Systems directly, but the client computers of which described in the invention presented are available to be connected with both Topology administration server 109 or Database administration  
10 apparatus 108 on Fig.1 of this application.

7. Column 8, line 46-50 in the US005924096A

"a cache site 608 or 610 can send a request to the master system 602 or 604 to get a list of the most recent events that occurred on data items 202 since the last time the cache made inquiry. The cache's request can specify the event types that should be returned."

i). The examiner has pointed in page 7 line 1-3 in the Final Rejection like below for the quotation of column 8, line 46-50 in the US005924096A".

20 and said database management system comprises:  
a receiver for a cache request,  
which receives the cache request transferred  
by the topology administration server;

"cache request" is changed to "retrieve-request".

and said database management system comprises:  
a receiver for a retrieve-request,  
30 which receives the retrieve-request transferred  
by the topology administration server;

In the Draper's distributed database system, a cache site 608 or 610 can send a request to the master system 602 or 604 to get a list of the most recent events that occurred on data items 202 since the last time the cache made inquiry. The cache's request can specify the event types that should be returned. In the database system of

this application can treat Draper's distributed database in the database domain as clustered database system which seems to be one database system as virtual database systems, which is connected to other database domains and the database domains communicate each other.

Therefore Draper's Distributed database system and the distributed database system described in the presented invention is different system from at the starting point.

10 8. Column 8, line 50-54 in the US005924096A

"This allows, for example, one cache to add data items 202 to the cache each time an add event occurs while another cache may only update data items 202 in the cache when a modify event occurs."

i). The examiner has pointed in page 7 line 7-9 in the Final Rejection like below for the quotation of column 8, line 50-54 in the US005924096A".

20 and a copy and transmission unit for a database object,  
which copies and transmits the database object  
in accordance  
with the cache request received  
by the receiver for a cache request.

"cache request" is changed to "retrieve-request".

30 and a copy and transmission unit for a database object,  
which copies and transmits the database object  
in accordance  
with the retrieve-request received  
by the receiver for a retrieve-request.

In the database system of this application can treat Draper's distributed database in the database domain as clustered database system which seems to be one database system as virtual database systems, which is connected to other database domains and the database domains communicate each other.

Therefore Draper's Distributed database system and the distributed database system described in the presented invention is different system from at the starting point.

### **CONCLUSION**

In sum, all pending claims are allowable.

The examiner is invited to contact the applicant at the telephone or e-mail provided below if in need of further information.

Reconsideration and favorable action are solicited.

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Respectfully submitted,  
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